

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331978-840

Luminaire Tested: **S123DIP-S775D805U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331978-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D805U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6199.4 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

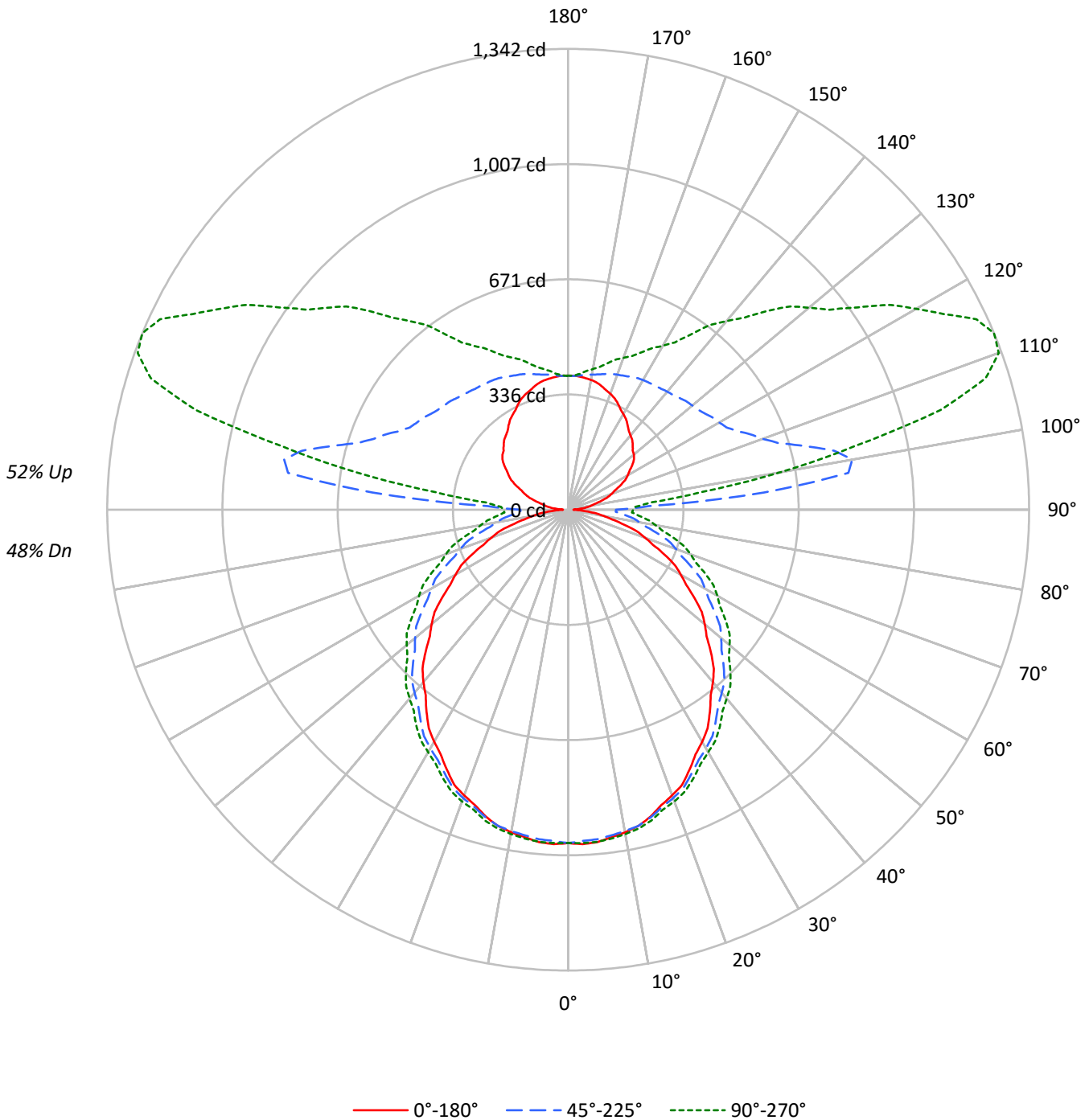
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	96	92	87	83	88	84	81	77	71	68	65	58	56	54	47	45	44	39
2	87	79	73	67	80	73	67	63	61	57	53	50	47	45	40	38	36	31
3	79	69	62	56	73	64	57	52	54	49	44	44	40	37	35	33	30	26
4	72	61	53	47	66	57	49	44	48	42	38	39	35	32	32	28	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	34	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.5
10°-20°	262.3	4.2
20°-30°	392.3	6.3
30°-40°	468.5	7.6
40°-50°	490.2	7.9
50°-60°	460.0	7.4
60°-70°	384.2	6.2
70°-80°	274.9	4.4
80°-90°	166.9	2.7
90°-100°	319.9	5.2
100°-110°	690.2	11.1
110°-120°	655.1	10.6
120°-130°	511.1	8.2
130°-140°	393.2	6.3
140°-150°	286.6	4.6
150°-160°	197.8	3.2
160°-170°	116.2	1.9
170°-180°	37.8	0.6
0°-30°	746.7	12.0
0°-40°	1215.2	19.6
0°-60°	2165.4	34.9
0°-90°	2991.5	48.3
90°-120°	1665.2	26.9
90°-150°	2856.1	46.1
90°-180°	3208.0	51.7
0°-180°	6199.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	15	75	139	176	189	11
95°	38	141	573	273	240	38
105°	100	170	714	1218	1123	106
115°	167	221	542	1145	1311	166
125°	228	271	487	876	1027	203
135°	266	316	460	707	818	205
145°	302	345	441	563	623	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.5	40.5	52.5	64.6	76.6	88.9	101.3	113.7	126.2	138.7	146.5
90°	15.3	28.4	41.5	55.4	68.5	81.8	96.1	110.5	124.9	139.3	146.4
92.5°	22.7	37.8	54.8	71.4	88.4	111.2	143.6	189.3	234.5	234.2	212.1
95°	38.5	50.0	67.9	90.5	120.2	161.3	239.8	369.0	510.1	572.9	491.7
97.5°	56.1	65.2	80.3	100.3	128.8	171.7	246.8	390.4	617.2	822.6	880.3
100°	68.0	76.2	89.3	107.9	134.3	174.3	240.3	368.0	586.5	839.7	1002.0
102.5°	80.4	88.6	100.2	117.4	141.2	178.1	238.4	348.2	543.7	793.6	1003.1
105°	100.1	108.1	118.5	133.5	154.2	186.5	239.2	330.7	490.0	714.1	947.3
107.5°	120.0	127.1	136.4	150.6	169.5	199.3	246.4	323.6	453.4	643.2	855.3
110°	134.2	140.9	149.1	162.0	179.6	208.5	253.5	322.9	438.1	603.0	797.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.1	154.0	161.4	173.6	190.5	218.2	260.2	324.9	427.1	573.9	746.4
115°	167.1	173.1	180.7	191.4	207.6	234.6	273.1	329.7	418.7	541.6	683.9
117.5°	187.0	192.4	198.0	207.0	223.8	248.3	286.0	336.9	413.2	519.1	642.8
120°	200.1	203.6	208.7	217.7	234.0	258.1	294.4	343.2	411.7	507.9	620.7
122.5°	212.1	215.0	219.5	228.7	243.7	268.7	303.9	349.1	412.2	499.2	601.7
125°	228.2	229.7	234.5	243.2	258.2	283.0	317.4	358.9	413.1	487.1	576.4
127.5°	241.3	243.5	249.0	257.6	274.0	298.0	330.3	367.3	415.6	477.9	553.4
130°	249.5	251.7	258.5	267.7	284.1	307.6	338.4	373.1	417.3	471.7	540.2
132.5°	255.0	257.9	265.6	276.9	293.5	316.0	345.2	378.3	417.8	466.9	527.6
135°	265.8	268.7	277.2	288.8	305.2	327.6	354.7	384.2	418.3	459.6	510.4
137.5°	276.0	279.1	287.5	299.9	316.2	336.6	361.5	388.6	418.1	452.7	495.4
140°	282.2	286.1	294.0	306.6	322.3	342.4	366.1	390.5	418.0	448.8	486.3
142.5°	289.7	292.9	301.1	312.4	328.0	346.4	368.8	392.0	417.1	444.1	477.4
145°	301.8	304.0	310.8	322.4	335.7	353.8	374.3	395.6	417.7	441.3	468.5
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.5
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	154.6	162.8	171.0	176.4	178.6	181.2	183.6	185.8
90°	155.2	164.0	172.8	179.6	181.1	184.2	187.3	188.9
92.5°	194.8	188.8	190.5	191.4	192.1	191.9	194.9	195.6
95°	403.4	319.2	284.6	261.1	248.3	243.6	240.4	239.6
97.5°	819.6	685.6	590.8	501.0	445.0	411.9	392.9	388.5
100°	1036.5	979.4	893.8	786.3	708.8	653.6	625.1	628.2
102.5°	1104.9	1109.5	1062.3	995.7	936.0	892.7	869.3	853.5
105°	1118.8	1204.4	1226.0	1209.8	1175.6	1147.7	1124.6	1122.7
107.5°	1048.6	1183.2	1258.7	1290.9	1293.6	1285.6	1279.2	1273.9
110°	984.7	1136.1	1241.6	1300.9	1324.9	1333.1	1333.4	1333.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	920.5	1074.9	1192.2	1267.3	1309.8	1331.4	1339.5	1341.9
115°	835.6	978.6	1100.2	1190.0	1251.1	1287.8	1305.5	1311.3
117.5°	771.6	895.9	1005.6	1096.7	1160.2	1201.9	1226.5	1233.7
120°	737.4	849.4	949.5	1032.8	1096.8	1142.7	1163.3	1169.6
122.5°	709.4	811.1	904.1	981.6	1038.6	1080.2	1102.6	1110.2
125°	671.4	762.3	843.1	909.6	961.7	998.2	1019.5	1026.6
127.5°	637.3	718.7	791.7	852.3	899.0	930.2	949.7	956.3
130°	615.6	691.2	759.6	816.2	859.5	889.3	907.3	915.0
132.5°	595.2	664.9	728.7	782.8	823.7	853.7	870.0	876.1
135°	567.5	627.8	683.4	731.0	770.9	795.8	811.1	817.9
137.5°	542.0	591.7	639.5	681.1	714.7	739.9	753.1	757.9
140°	526.8	570.7	612.1	648.3	679.5	702.8	716.6	717.0
142.5°	512.0	549.7	585.7	617.4	644.1	664.9	677.4	677.8
145°	495.6	523.6	550.7	575.0	595.7	613.2	620.5	623.0
147.5°	482.4	503.7	524.6	541.6	557.4	569.5	576.3	577.8
150°	473.7	491.9	508.5	523.7	536.0	545.1	550.4	550.9
152.5°	466.8	482.4	497.1	509.6	519.1	527.1	530.1	530.2
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

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